

REMARKS

This Response is submitted in response to the Office Action mailed on April 25, 2006. Claims 7, 8 and 14 to 18 are pending in the application. Claims 7, 16, 17 and 18 have been amended. The Specification has also been amended. No new matter has been added by these amendments. The Commissioner is hereby authorized to charge deposit account 02-1818 for any fees which are due and owing.

Applicants gratefully acknowledge the decision of the Examiner to withdraw the election requirement to include all the species recited in Claims 7 and 18 in the examination.

In the Office Action, the Specification is objected to for not providing a sequence identifier for each of the sequences recited in the Specification. In response, Applicants have amended the Specification to provide a sequence identifier for the amino acid sequence at page 11, fourth paragraph, and the nucleotide sequences recited at page 14, third paragraph. Applicants have also submitted herewith a Sequence Listing as a substitute paper copy and in computer readable form. The computer readable form of the Sequence Listing is provided in triplicate. The content of the Sequence Listing is identical to the sequences recited in the Specification and includes no new matter. Therefore, Applicants respectfully submit that the Specification is in compliance with 37 CFR 1.821-1.825 and that the objection should be withdrawn.

Claim 16 is also objected to for a minor informality which has been corrected.

In the Office Action, Claims 7, 8 and 14 to 18 are rejected under 35 U.S.C. §112, first paragraph, for including subject matter in the claims that allegedly is not adequately described in the Specification. Specifically, the Office Action contends that the Specification does not disclose a method for hydrolyzing protein-containing materials by contacting a proteinaceous material with a Koji mold having a modified creA. The Office Action also contends that the Specification does not indicate a protein hydrolysate produced by the method.

Applicants respectfully submit that one of skill in the art could reasonably conclude that Applicants were in possession of the claimed invention based on what is disclosed in the Specification what was known in the art at the time of filing of the instant application. As evidenced by the European patent documents (EP 0 417 481, EP 0 429 760 and EP 96 201 923.8)

referenced in the discussion of the State of the Art in the Specification at pages 2 and 3, methods of hydrolyzing protein-containing materials with a Koji mold to produce protein hydrolysates was known in the art.

To this end, each of the referenced patent documents provide examples of how hydrolyzation of protein-containing materials can be achieved. For example, EP 0 417 481 (which has the same disclosure as related U.S. Patent No. 5,141,756, the '756 patent) describes a process that includes inoculating a proteinaceous material, such as mixture of whole soya meal and roasted wheat meal, with a koji culture to produce a fermented soya sauce. See the '756 patent at, for example, column 2, line 9 through column 3, line 12 and Examples 1, 2 and 3. Also, EP 0 429 760 (which has the same disclosure as related U.S. Patent No. 5,141,757, the '757 patent) describes a process for the production of a flavoring agent using a koji culture. See the '757 patent at, for example, column 3, lines 16-33. Likewise, EP 96 201 923.8 (which has the same disclosure as related U.S. Patent No. 6,020,009, the '009 patent) describes a process for the production of a meat flavor by fermentation with a koji culture including *Aspergillus oryzae*. See the '009 patent at, for example, column 4, lines 4-21 and Examples 1, 2 and 3.

Therefore, methods for hydrolyzing protein-containing materials by contacting a proteinaceous material with a Koji mold and protein hydrolysates produced by these methods were well known in the art at the time of filing the instant application. The specification need not disclose what is well-known to those skilled in the art and preferably omits that which is well-known to those skilled and already available to the public. *In re Buchner*, 929 F.2d 660, 661, 18 USPQ2d 1331, 1332 (Fed. Cir. 1991). Accordingly, a method for hydrolyzing protein-containing materials by contacting a proteinaceous material with a Koji mold and a protein hydrolysate produced by the method need not be disclosed in detail in the Specification to comply with 35 U.S.C. §112, first paragraph.

The Office Action also states that the Specification does not disclose the use of creA mutant in combination with an enzyme or microorganism having a prolidase activity as recited in Claim 8. The Specification, however, makes clear that certain microorganisms such as koji molds secrete enzymes that act as proteinases and peptidases. See Specification at, for example, page 1, third and fourth paragraphs. This protease activity described throughout the Specification is also well known to include prolidase activity. Prolidase activity of an enzyme is

known in the art to be a specific type of protease activity where the enzyme catalyzes the cleavage of bonds between specific functional groups of a protein, namely, aminoacyl and proline groups of a protein. Also, according to the guidelines in MPEP §2163(I), written descriptive support can be found even when the only description is in the original claims which constitute their own description. Therefore, Applicants respectfully submit that the combination of the creA mutant with an enzyme or microorganism having a prolidase activity is supported in the Specification and the level of skill in the art at the time of the invention.

The Office Action further alleges that the Specification does not disclose the use of a functional derivative of the areA gene as recited in Claim 17. See Office Action, page 3. It is well known in the art that the function of the areA gene product can be performed by areA homologues or derivatives as set forth in the Specification at, for example, page 3, fifth paragraph, and in the reference cited therein (Arst et al., Mol. Gen. Genet. 26(1973), 111-141). See also page 6, second paragraph of the Specification. Therefore, Applicants respectfully submit that one of skill in the art would recognize what would constitute functional derivatives of an areA gene based on the description in the Specification and what was known in the art.

In the Office Action, Claim 16 is rejected under 35 U.S.C. §112, first paragraph, as allegedly failing to comply with the enablement requirement. In response, Applicants submit herewith a CNCM notification of receipt stating that a deposit of the NF14 mutant of *Aspergillus oryzae* has been accepted by an International Depository Authority under the provisions of the Budapest Treaty. In addition, Applicants have amended the Specification in accordance with MPEP §2404.01 to provide information regarding the deposit and to further state that all restrictions upon public access to the deposit will be irrevocably removed upon the grant of a patent on this application. Therefore, Applicants respectfully submit that the description of the deposited material is sufficient to permit its verification and examination.

Accordingly, Applicants respectfully submit that the disclosure requirements under 35 U.S.C. §112, first paragraph, have been satisfied, and that the rejection should be withdrawn.

In the Office action, Claims 7-8 and 14-18 are rejected under 35 U.S.C. §112, second paragraph, for being indefinite. In particular, Claim 7 was rejected for allegedly lacking an essential step of the method. Claim 7 has been amended to clarify that the method includes the

step of providing a Koji mold to protein-containing materials for hydrolyzing the protein-containing materials. Support for this amendment can be found in the Specification at, for example, page 4, third paragraph, and in the knowledge of one skilled in the art as further provided in the patent documents referenced in the Specification and described above. Accordingly, no new matter is added by this amendment and the rejection should be withdrawn.

In addition, Claims 7, 17 and 18 were rejected under 35 U.S.C. §112, second paragraph, for being indefinite based on lack of antecedent basis. Applicants have amended the claims to correct the antecedent basis and respectfully submit that the rejection has been overcome.

For the foregoing reasons, Applicants respectfully request reconsideration of the above-identified patent application and earnestly solicit an early allowance of same.

Respectfully submitted,

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BY 

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Paris, le 09 mars 1999

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SUISSE**12 MARS 1999****LETTRE RECOMMANDEE
AVEC ACCUSE DE RECEPTION
ET TELECOPIE : (41) 21 924 28 80 / (41) 21 785 89 25**

N/R : CNCM-6723.903

Obj : Enregistrement d'un champignon filamenteux "NF14 (areA 1, creA 1)"
en vue d'un dépôt aux termes du Traité de BudapestCop : Monsieur Peter van den Broek
Nestlé Research Centre, Vers-chez-les-Blanc, P.O. Box 44, CH-1000 LAUSANNE 26

Monsieur,

Par la présente, nous vous confirmons avoir reçu ce jour, en vue d'un dépôt initial suivant la règle 6.1 du Traité de Budapest, une subculture sur gélose pour le microorganisme identifié ci-dessous ainsi que les documents originaux y relatifs.

Votre projet de dépôt a été enregistré à la CNCM
à la date du **09 MARS 1999** sous le numéro suivant

Référence d'identification**NF14 (are A1 , creA 1)**Numéro d'enregistrement CNCM**I-2165**

Si un dépôt est accepté, le numéro d'ordre attribué par la CNCM est identique
au numéro d'enregistrement et la date du dépôt est la date de l'enregistrement.

Selon les indications données au cours de notre conversation téléphonique de ce jour :

Le matériel microbien n'a pas été remis sous forme de préparations lyophilisées ou congelées conformément aux exigences particulières de la CNCM en application de la règle 6.3.a.i) du Traité de Budapest.

En conséquence, l'acceptation du présent projet de dépôt sera soumise, à la fin des contrôles de viabilité et de pureté, à un accord préalable par le responsable scientifique du déposant sur la conformité d'une subculture d'un lot congelé, préparé par la CNCM.

Restant à votre disposition,
nous vous prions d'agréer, Monsieur, l'expression de notre considération distinguée.


Madame Y. CERISIER
Directeur Administratif de la CNCM**BEST AVAILABLE COPY**